VIRGINIA POLLUTION ABATEMENT (VPA)

PERMIT APPLICATION

FORM A – GENERAL INFORMATION

Department of Environmental Quality

Rev. 06-2014

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
FORM A
ALL APPLICANTS

1. FACILITY OR APPLICANT INFORMATION

Facility Name or Applicant Name:	Nutri-Blend, Inc.
County/City:	Cumberland County, VA
Physical Location/ Address:	473 Salem Church Rd Cumberland 23040
Mailing Address:	PO Box 38060 Richmond, VA 23231

2. OWNER INFORMATION

Owner Legal Name:	Nutri-Blend, Inc.
Mailing Address:	PO Box 38060 Richmond, VA 23231
Telephone Number:	804-222-7514
Email address:	davidjsimons@msn.com

3. OWNER CONTACT INFORMATION

Owner Contact Name:	Roger F. Hatcher, PhD
Title:	Consultant
Mailing Address:	32 Angola Rd, Farmville, VA 23901
Telephone Number:	434-392-3088
Email address:	rfhatcher1777@gmail.com

4. EXISTING PERMITS: (e.g., VPA, VPDES; VWP, RCRA; UIC; other)

Agency	Permit Type	Permit Number
DEQ	VPA	VPA 03005

5. NATURE OF BUSINESS: Management of biosolids, including lime stabilization, storage and composting.

SIC Code(s):	0711		

VIRGINIA POLLUTION ABATEMENT PERMIT APPLICATION
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6. TYPE OF POLLUTANT MANAGEMENT ACTIVITY: *check the appropriate box(es)*

	Proposed	Existing
Animal Feeding Operations (complete Form B)	☐	☐
Industrial Waste (complete Form C & Form D: Parts D-V & D-VI)	☐	☐
Land Application of Municipal Effluent (complete Form D: Parts D-I & D-III)	☐	☐
Land Application of Biosolids/Sewage Sludge (complete Form D: Parts D-II, D-IV, D-V & D-VI; and Liability Requirements for Transport, Storage and Land Application of Biosolids Form)	☐	x
Reclamation and/or Distribution of Reclaimed Wastewater (Application Addendum)	☐	☐

7. GENERAL LOCATION MAP:

Provide a general location map which clearly identifies the location of the facility.

8. CONSENT TO RECEIVE AND CERTIFY RECEIPT OF ELECTRONIC MAIL:

The Department of Environmental Quality (DEQ) may deliver permits, certifications and plan approvals to recipients, including applicants or permittees, by electronically certified mail where the recipients notify DEQ of their consent to receive mail electronically (§ 10.1-1183). Check only one of the following to consent to or decline receipt of electronic mail from DEQ as follows:

☐ Applicant or permittee agrees to receive by electronic mail the permit and any plan approvals associated with the permit that may be issued for the proposed pollutant management activity, and to certify receipt of such electronic mail when requested by the DEQ.

x Applicant or permittee declines to receive by electronic mail the permit and any plan approvals associated with the permit that may be issued for the proposed pollutant management activity.

9. SIGNATURE AND CERTIFICATION STATEMENT:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. I further certify that I am an authorized signatory as specified in the VPA Permit Regulation (9VAC25-32).

Signature:	David Simons	Date:	3/9/20
Printed Name:	David Simons		
Title:	*Vice-President*		

PUBLIC NOTICE BILLING AUTHORIZATION FORM

I hereby authorize the Department of Environmental Quality to have the cost of publishing a public notice billed to the Agent/Department shown below. The public notice will be published once a week for two consecutive weeks in accordance with 9 VAC 25-32-140. A.

Agent/Department to be billed: Nutri-Blend Inc

Owner: Larry Matthews

Applicant's Address: PO Box 38060

Richmond, VA

Agent's Telephone No: 804-222-7514

Authorizing Agent: William M. Burnett
Signature

Facility Name:
Permit No. VPA00057

Please return to:

Stephanie Bowman
DEQ-Blue Ridge Regional Office
3019 Peters Creek Road
Roanoke, VA 24019
stephanie.bowman@deq.virginia.gov

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-II LAND APPLICATION OF BIOSOLIDS

All of the information provided in this application will become part of the Biosolids Management Plan associated with a VPA individual permit issued for the proposed activity.

General Information

1. Owner Legal name. (Provide the same name given on Form A, Item 2).

Nutri-Blend, Inc. Biosolids Storage and Treatment Facility is the facility name.

2. Provide a general description of the proposed operation.
   a. **Source List:** Provide a list of the facilities that generate the biosolids that you currently land apply or propose to land apply. If the facility has multiple wastestreams that receive different treatment types; identify the biosolids produced by each treatment process as a separate source from the generating facility. Include all sources that you wish to be included in this permit. proposed only sources that are identified as approved on the DEQ Sources list. (A source of biosolids at the generating facility is the product of a specific series of treatment unit processes, and a single facility may have multiple sources. For example, a generator that splits its waste activated sludge, half to a digester and a belt press and the other half to lime stabilization has 2 sources of biosolids). Include the following information using the Form D VPA Permit Application Workbook **Tab D II.2.a. Source List**

The application for this facility is for storage, lime stabilization, and composting. The ultimate fate of the stored Part B biosolids is covered by multiple county permits- i.e., Cumberland, Buckingham, Prince Edward, and 17 other counties. If compost is produced, it will comply with the composting options as shown in Appendix C of the original VPA permit application or in accordance with the VADEQ recently adopted compost regulation. A list of potential sources for biosolid/sludge storage and/or lime stabilization and composting at this facility is attached as 2.a. Sources.

1) Generating Facility's name (as it is identified on the DEQ Sources List)
2) Generating Facility's discharge permit number VPDES, NPDES or other state permit;
3) Biosolids Treatment Type
4) Biosolids Quality (EQ Cake biosolids; Class A CPLR biosolids; Class B PC biosolids; Class B CPLR biosolids)
5) Generating Facility's Owner
6) Generating Facility's location – Address, city and state
7) Annual Amount of Sludge/Biosolids Produced- ***variable***
8) Annual Amount Biosolids Land Applied - ***variable***
9) Approval Date

   b. Provide each generating facility's odor control plan for the sources identified above, if a current odor control plan has not been submitted to DEQ. The odor control plan shall contain at minimum: ***N/A – odor is controlled at the storage building.***
      1) Methods used to minimize odor in producing biosolids;
      2) Methods used to identify malodorous biosolids before delivery to the land applier (at the generating facility);
      3) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and
      4) Methods used to abate malodor from biosolids if land applied;

Nutri-Blend's odor control plan is to stay in compliance with the Cumberland County's 18 proffers. Its main features are:

- ***The facility manager will not accept any materials with unacceptable odor that cannot be controlled by the addition of lime.***
- ***Everyday odor control is achieved with 4 independent ventilation fans, adjusted to temperature, wind direction and speed, to achieve compliance with the odor restrictions in the Cumberland County proffers.***

c. Provide an updated Non-Hazardous Declaration Statement - Part D-V for each biosolids source from the approved source list.

This information is in the existing 20+ county permits we have for land application. We list 49 potential sources, most of whom we have no prior contracts. They are listed to expedite their future use if the opportunity arises.

d. General location: Describe the general location of the sites proposed for application, and

Not applicable to this application.

e. Methods of biosolids application proposed.

Not applicable to this application.

3. Identify the methods for notification of DEQ and local government prior to proposed land application activities.
N/A

4. Provide to the DEQ and to each locality in which the biosolids are to be applied, written evidence of financial responsibility. Evidence of financial responsibility shall be provided in accordance with the requirements specified under 9VAC25-32-770 et seq.

On file at DEQ in each county permit.

Design Information

Biosolids Characterization ***N/A This information is part of each individual county permit.***

6. For each new source of biosolids proposed for land application provide:

   a. Part D-IV, a Biosolids Characteristics Form for each source of biosolids that is not identified on the VA DEQ Approved Biosolids Source List. The following biosolids sources will always require a characterization form:
      1) biosolids from a new generating facility;
      2) biosolids from an existing generator that has never been approved for land application in Virginia;
      3) biosolids previously approved for which the generator has not submitted biosolids monitoring data in the past 5 years; or
      4) biosolids produced by a new treatment process within an existing facility.
   b. Part D-V - Non-Hazardous Declaration Statement.

Biosolids Storage

7. List in a tabular format, using Form D VPA Permit Application Workbook **Tab D II.7. Storage**, all existing and proposed **routine** biosolids storage facilities **storage** under the control of the permit applicant. Provide the permit name and number associated with the storage facility or site. Include for each, the storage facility or site name, the location, total storage capacity, current available capacity and the biosolids contracts currently permitted or assigned to these facilities or sites.

Note: The building has 48,000 sq. ft. of floor capacity. The total capacity is entirely dependent upon the physical properties of the biosolids. The original 30,000 sq. ft. design was designed on lime stabilized biosolids from DC Water and Pitscataway, MD. Digested biosolids are more fluid and decrease the totals storage capacity.

- ***As of 1-20-2020, the building was at 50% capacity, a number which changes daily dependent on weather.***
- ***Our current contracts are with City of Richmond, City of Petersburg, Henrico County, VA, and Pitscataway, MD.***

8. Provide plans and specifications for proposed **routine storage** facilities that depict the following information:

Currently there is only one storage building. However, we have included a site layout which depicts potential locations on the existing site which are in compliance with boundary, streams, and wetlands. The large building identical to the existing permitted building. Other locations will likely be if composting is added to Nutri-blend's services, primarily associated with compost aging and storage. All appropriate county permits will be obtained, and the O&M Manual will be modified to add these processes.

a. Site layout on a recent 7.5-minute topographic quadrangle or other appropriate scaled map with the following information:

1) Location of any required soil, geologic and hydrologic test holes or borings

None required. The first building is complete and in use. Prior to construction a thorough geotechnical site study was performed and reviewed by the VADHS.

2) Location of the following field features within 0.25 miles of the site boundary (indicated on the map) with the approximate distances from the site boundary.

Known features are shown on Figure 3 of the original document – Section D

(a) Water wells (operating or abandoned).

Three wells locations known (Figure 3, Section D)

(b) Surface waters.

Willis River (Figure 3, Section D)

(c) Springs.

None

(d) Public water supplies.

None

(e) Sinkholes.

None

(f) Underground and/or surface mines.

None

(g) Mine pool (or other) surface water discharge points.

None

(h) Mining spoil piles and mine dumps.

None

(i) Quarries.

None

(j) Sand and gravel pits.

None

(k) Gas and oil wells.

None

(l) Diversion ditches.

As built for erosion control (see site plans Appendix G)

(m) Occupied dwellings, including industrial and commercial establishments.

As shown. (Figure 3 Section D)

(n) Landfills - dumps.

None

(o) Other unlined impoundments.

Storm water retention basin (Appendix G)

(p) Septic tanks and drainfields.

Two (2) known (Figure 3 Section D)

(q) Injection wells.

None

b. Topographic map (10-foot contour preferred) of sufficient detail to clearly show the following information:

This information is contained in the site development plans which are included as Appendix G of the original application. The plans for the existing and proposed buildings are shown in Appendix H of the original application.

(1) Maximum and minimum percent slopes.
(2) Depressions on the site that may collect water.
(3) Drainage ways that may attribute to rainfall run-on to or runoff from this site.
(4) Portions of the site (if any) which are located within the 100-year floodplain.

c. Data and specifications for the liner proposed for seepage control.

The process is dry; however, all activities occur inside a closed building with 6" concrete floors as shown on the building plans (Appendix G). If free water or leachate is encountered inside of the building, it will be absorbed by sawdust and mixed with the biosolids.

d. Scaled plan view and cross-sectional view of the storage facilities or sites showing inside and outside slopes of all embankments and details of all appurtenances.

e. Calculations justifying impoundment capacity, including freeboard where applicable.

Part of the erosion control plan (Appendix G original application)

f. A description of supernatant handling and disposal.

There is no supernatant. Occasionally small amounts of water accompany the biosolids shipments. As stated above this water will be absorbed into sawdust and mixed with the biosolids or directed to 2 leachate collection tanks detailed in the 2011 modification of the O&M Manual.

g. Groundwater monitoring plans for the facilities or sites including pertinent hydrogeological data to justify upgradient and downgradient well location and depth.

Groundwater monitoring is not required based on the original site borings associated with the original VASHD permit. The site is underlayed by a very deep hard clay with a 10 to -9 cm./sec permeability.

9. For the routine storage of biosolids, provide evidence of certification by the local government of the locality in which the biosolids are to be stored that the storage site is consistent with all applicable ordinances. Evidence of certification shall consist of the following:

In letters dated April 19, 2007 and June 14th, 2007 (Appendix E of the original application) the Cumberland County Planning and Zoning Administrator confirmed the Nutri-Blend's Biosolids Storage and Treatment Facility site does comply with Cumberland County zoning laws. Additionally, an Occupancy Permit was issued to the facility on Jan 31, 2008 (Appendix E of the original application).

a. A copy of the certification from the local government confirming that the storage site is consistent with all applicable ordinances, or where the local government fails to respond within 30 days of receiving the request for certification, a copy of the letter from the applicant to the local government requesting certification of the storage facility; **or**

N/A

b. A copy of the special exception or special use permit from the local government that has adopted an ordinance in accordance with § 62.1-44.19:3.R of the Code of Virginia.

N/A

Biosolids Transport

10. Provide a detailed description for each of the following:

a. Vehicles that will be used to transport biosolids from generators or storage to land application sites;

This is information located in each of the 20+ county permits.

b. Routes to be used to transport biosolids from the generator(s) to storage unit(s);

Appendix I contains the routes from 49 potential sources of biosolids or sludge that might utilize Nutri-Blend's Cumberland County facility. All routes were generated by MapQuest.

c. Procedures for biosolids off-loading at the biosolids facilities and the land application site together with spill prevention, cleanup (including vehicle cleaning) and emergency spill notification and cleanup measures; and

All trucks will be dumped inside the facility buildings(s). Trucks will exit the building(s) through a wheel wash station to remove sludge or biosolids adhering to the truck exterior. The Spill Control Plan is in the current O&M manual.

d. Voucher system to be used to document transport and delivery of biosolids from their source to the land application site or a facility to further process the biosolids for marketing. Also describe record retention for vouchers.

Every load of sludge or biosolids received by the facility is accompanied by a weight scale ticket showing the net weight of the load and the source. The tickets are forwarded to Nutri-Blend's Richmond, Virginia office and kept on file.

Field Operations

11. For field operations involving storage, provide a detailed description for each of the following:

Not applicable. All operations will take place inside the buildings.

a. Routine storage—procedures for biosolids loading of transport vehicles, equipment cleaning, freeboard maintenance for storage of liquid biosolids, and inspections for structural integrity of the storage unit;

b. On-site storage—procedures for DEQ approval and implementation; designated site locations if provided in the "Design Information"; the specific site criteria including the best management practices that will be utilized to prevent contact with storm water run on or runoff and the procedures to be followed to ensure the 45 day time limit will be met;

c. Staging - procedures for DEQ notification; procedures to be followed including either designated site locations provided in the "Design Information" or the specific site criteria for such locations including the liner or cover requirements and the time limit assigned for such use;

d. Procedures for reestablishment of off-loading and staging areas.

12. Provide a detailed description for each of the following: ***N/A***

a. The biosolids spreader vehicles and the specifications of each vehicle.
b. Procedures for calibrating each spreader based on the solids content of various biosolids to ensure uniform distribution and appropriate loading rates on a day-to-day basis.
c. Procedures used to ensure that operations address the following constraints:
   (1) Application of biosolids to frozen ground, pasture or hay fields, crops for direct human consumption and saturated or ice/snow covered ground; and
   (2) Establishment of setback distances, slopes, prohibited access for beef and dairy animals, soil pH requirements, and proper site specific biosolids loading rates on a field-by-field basis.

13. Provide a Land Applier Odor Control Plan that includes at a minimum: ***N/A***

a. Methods used to identify and abate malodorous biosolids in the field prior to land application, and
b. Methods used to abate malodorous biosolids if land applied.

Land Application Sites *N/A 14 - 24*

14. Provide a comprehensive list that includes each field proposed for inclusion in the permit. For each field include the following information using Form D VPA Permit Application Workbook Tab **D II.14.a Permitted Fields** or Tab **D II.14.b New Fields**: *DEQ Control Number; Site Book Name; Field ID in the format as it will be used in monthly reports; gross acres of the field; landowner names, date on landowner agreement(s); Tax parcel ID;* latitude and longitude of each land application site in decimal degrees to three decimal places and the method of determination; the type of site and crops to be grown. For modifications to existing fields, include the change

in acreage and a description of the modification to the field.

Submission of a completed Fields tab in the Form D VPA Permit Application Workbook supersedes the need to complete the Landowner Coordination Form in the Landowner Agreement, VPA Permit Application Form D-VI.

Site Type includes agricultural land, forest, a public contact site, or a reclamation site, as defined in 9VAC25-32-10.

Use the **Permitted Fields** tab for reissuance and modifications to existing fields. Use the **New Fields** tab for issuance of new permits and addition of new fields during reissuance and modifications.

When submitting a permit application for a permit modification, do not include existing permitted fields that are not being modified or removed.

16. Provide a properly completed Land Application Agreement form for each landowner, Part D-VI.
    - *Each landowner must sign his or her own landowner agreement form.*
    - *Provide the name, mailing address, and telephone number of the site owner identified on that form.*
    - *See Part D-VI: Land Application Agreement – Biosolids and Industrial Residuals – Instructions for specific details on completing the form.*

17. Provide a legible topographic map and aerial photograph, including legend, of proposed application areas to scale as needed to depict the following features:

    a. Property boundaries;
    b. Surface watercourses, including drainage ways;
    c. Water supply wells and springs;
    d. Roadways;
    e. Rock outcrops;
    f. Slopes;
    g. Sinkholes
    h. Frequently flooded areas (National Resources Conservation Service (NRCS) designation);
    i. Occupied dwellings within 400 feet of the property boundaries and all existing dwelling and property line setback distances;
    j. Publicly accessible properties and occupied buildings within 400 feet of the property boundaries and the associated extended setback distances; and
    k. The gross acreage of the fields where biosolids will be applied;

18. Provide a county map or other map of sufficient detail to show general location of the site and proposed transport vehicle haul routes to be utilized from the treatment plant or storage facility.

19. Provide county tax maps labeled with Tax Parcel ID(s)] for each farm to be included in the permit, which may include multiple fields to depict properties within 400 feet of the field boundaries.

20. Provide a USDA soil survey map, if available, of proposed sites for land application of biosolids.

21. Provide the name, mailing address, and telephone number of the person who applies biosolids to the site, if different from the applicant.

22. Provide the following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site:

    a. Whether the applicant has contacted VA DEQ to ascertain whether bulk biosolids subject to 9VAC25-32-356 Table 3 has been applied to the site on or since July 20, 1993, and if so, the name of person contacted; and
    b. Identification of facilities other than the applicant's facility that have sent, or are sending, biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site since July 20, 1993, if, based on the inquiry in item (a) above, bulk biosolids subject to cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been applied to the site since July 20, 1993.

23. Provide a nutrient management plan approved by the Department of Conservation and Recreation and a copy of the DCR approval letter for application sites meeting the following conditions:

    a. Sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;
    b. Sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;
    c. Mined or disturbed land sites where land application is proposed at greater than agronomic rates; or
    d. Other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters.

24. For mined or disturbed sites where land application is proposed at greater than agronomic rates, provide a reclamation plan that establishes the biosolids application rates and other site-specific management practices.

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-II LAND APPLICATION OF BIOSOLIDS

All of the information provided in this application will become part of the Biosolids Management Plan associated with a VPA individual permit issued for the proposed activity.

General Information

1. Owner Legal name. (Provide the same name given on Form A, Item 2).

Nutri-Blend, Inc. Biosolids Storage and Treatment Facility is the facility name.

2. Provide a general description of the proposed operation.
   a. **Source List:** Provide a list of the facilities that generate the biosolids that you currently land apply or propose to land apply. If the facility has multiple wastestreams that receive different treatment types; identify the biosolids produced by each treatment process as a separate source from the generating facility. Include all sources that you wish to be included in this permit. proposed only sources that are identified as approved on the DEQ Sources list. (A source of biosolids at the generating facility is the product of a specific series of treatment unit processes, and a single facility may have multiple sources. For example, a generator that splits its waste activated sludge, half to a digester and a belt press and the other half to lime stabilization has 2 sources of biosolids). Include the following information using the Form D VPA Permit Application Workbook **Tab D II.2.a. Source List**

The application for this facility is for storage, lime stabilization, and composting. The ultimate fate of the stored Part B biosolids is covered by multiple county permits- i.e., Cumberland, Buckingham, Prince Edward, and 17 other counties. If compost is produced, it will comply with the composting options as shown in Appendix C of the original VPA permit application or in accordance with the VADEQ recently adopted compost regulation. A list of potential sources for biosolid/sludge storage and/or lime stabilization and composting at this facility is attached as 2.a. Sources.

      1) Generating Facility's name (as it is identified on the DEQ Sources List)
      2) Generating Facility's discharge permit number VPDES, NPDES or other state permit;
      3) Biosolids Treatment Type
      4) Biosolids Quality (EQ Cake biosolids; Class A CPLR biosolids; Class B PC biosolids; Class B CPLR biosolids)
      5) Generating Facility's Owner
      6) Generating Facility's location – Address, city and state
      7) Annual Amount of Sludge/Biosolids Produced- ***variable***
      8) Annual Amount Biosolids Land Applied - ***variable***
      9) Approval Date

   b. Provide each generating facility's odor control plan for the sources identified above, if a current odor control plan has not been submitted to DEQ. The odor control plan shall contain at minimum: ***N/A – odor is controlled at the storage building.***
      1) Methods used to minimize odor in producing biosolids;
      2) Methods used to identify malodorous biosolids before delivery to the land applier (at the generating facility);
      3) Methods used to identify and abate malodorous biosolids if delivered to the field, prior to land application; and
      4) Methods used to abate malodor from biosolids if land applied;

Nutri-Blend's odor control plan is to stay in compliance with the Cumberland County's 18 proffers. Its main features are:

- ***The facility manager will not accept any materials with unacceptable odor that cannot be controlled by the addition of lime.***
- ***Everyday odor control is achieved with 4 independent ventilation fans, adjusted to temperature, wind direction and speed, to achieve compliance with the odor restrictions in the Cumberland County proffers.***

c. Provide an updated Non-Hazardous Declaration Statement - Part D-V for each biosolids source from the approved source list.

This information is in the existing 20+ county permits we have for land application. We list 49 potential sources, most of whom we have no prior contracts. They are listed to expedite their future use if the opportunity arises.

d. General location: Describe the general location of the sites proposed for application, and

Not applicable to this application.

e. Methods of biosolids application proposed.

Not applicable to this application.

3. Identify the methods for notification of DEQ and local government prior to proposed land application activities.
N/A

4. Provide to the DEQ and to each locality in which the biosolids are to be applied, written evidence of financial responsibility. Evidence of financial responsibility shall be provided in accordance with the requirements specified under 9VAC25-32-770 et seq.

On file at DEQ in each county permit.

Design Information

Biosolids Characterization ***N/A This information is part of each individual county permit.***

6. For each new source of biosolids proposed for land application provide:

   a. Part D-IV, a Biosolids Characteristics Form for each source of biosolids that is not identified on the VA DEQ Approved Biosolids Source List. The following biosolids sources will always require a characterization form:
      1) biosolids from a new generating facility;
      2) biosolids from an existing generator that has never been approved for land application in Virginia;
      3) biosolids previously approved for which the generator has not submitted biosolids monitoring data in the past 5 years; or
      4) biosolids produced by a new treatment process within an existing facility.
   b. Part D-V - Non-Hazardous Declaration Statement.

Biosolids Storage

7. List in a tabular format, using Form D VPA Permit Application Workbook **Tab D II.7. Storage**, all existing and proposed **routine** biosolids storage facilities **storage** under the control of the permit applicant. Provide the permit name and number associated with the storage facility or site. Include for each, the storage facility or site name, the location, total storage capacity, current available capacity and the biosolids contracts currently permitted or assigned to these facilities or sites.

Note: The building has 48,000 sq. ft. of floor capacity. The total capacity is entirely dependent upon the physical properties of the biosolids. The original 30,000 sq. ft. design was designed on lime stabilized biosolids from DC Water and Pitscataway, MD. Digested biosolids are more fluid and decrease the totals storage capacity.

- ***As of 1-20-2020, the building was at 50% capacity, a number which changes daily dependent on weather.***
- ***Our current contracts are with City of Richmond, City of Petersburg, Henrico County, VA, and Pitscataway, MD.***

8. Provide plans and specifications for proposed **routine storage** facilities that depict the following information:

Currently there is only one storage building. However, we have included a site layout which depicts potential locations on the existing site which are in compliance with boundary, streams, and wetlands. The large building identical to the existing permitted building. Other locations will likely be if composting is added to Nutri-blend's services, primarily associated with compost aging and storage. All appropriate county permits will be obtained, and the O&M Manual will be modified to add these processes.

a. Site layout on a recent 7.5-minute topographic quadrangle or other appropriate scaled map with the following information:

1) Location of any required soil, geologic and hydrologic test holes or borings

None required. The first building is complete and in use. Prior to construction a thorough geotechnical site study was performed and reviewed by the VADHS.

2) Location of the following field features within 0.25 miles of the site boundary (indicated on the map) with the approximate distances from the site boundary.

Known features are shown on Figure 3 of the original document – Section D

(a) Water wells (operating or abandoned).

Three wells locations known (Figure 3, Section D)

(b) Surface waters.

Willis River (Figure 3, Section D)

(c) Springs.

None

(d) Public water supplies.

None

(e) Sinkholes.

None

(f) Underground and/or surface mines.

None

(g) Mine pool (or other) surface water discharge points.

None

(h) Mining spoil piles and mine dumps.

None

(i) Quarries.

None

(j) Sand and gravel pits.

None

(k) Gas and oil wells.

None

(l) Diversion ditches.

As built for erosion control (see site plans Appendix G)

(m) Occupied dwellings, including industrial and commercial establishments.

As shown. (Figure 3 Section D)

(n) Landfills - dumps.

None

(o) Other unlined impoundments.

Storm water retention basin (Appendix G)

(p) Septic tanks and drainfields.

Two (2) known (Figure 3 Section D)

(q) Injection wells.

None

b. Topographic map (10-foot contour preferred) of sufficient detail to clearly show the following information:

This information is contained in the site development plans which are included as Appendix G of the original application. The plans for the existing and proposed buildings are shown in Appendix H of the original application.

(1) Maximum and minimum percent slopes.
(2) Depressions on the site that may collect water.
(3) Drainage ways that may attribute to rainfall run-on to or runoff from this site.
(4) Portions of the site (if any) which are located within the 100-year floodplain.

c. Data and specifications for the liner proposed for seepage control.

The process is dry; however, all activities occur inside a closed building with 6" concrete floors as shown on the building plans (Appendix G). If free water or leachate is encountered inside of the building, it will be absorbed by sawdust and mixed with the biosolids.

d. Scaled plan view and cross-sectional view of the storage facilities or sites showing inside and outside slopes of all embankments and details of all appurtenances.

e. Calculations justifying impoundment capacity, including freeboard where applicable.

Part of the erosion control plan (Appendix G original application)

f. A description of supernatant handling and disposal.

There is no supernatant. Occasionally small amounts of water accompany the biosolids shipments. As stated above this water will be absorbed into sawdust and mixed with the biosolids or directed to 2 leachate collection tanks detailed in the 2011 modification of the O&M Manual.

g. Groundwater monitoring plans for the facilities or sites including pertinent hydrogeological data to justify upgradient and downgradient well location and depth.

Groundwater monitoring is not required based on the original site borings associated with the original VASHD permit. The site is underlayed by a very deep hard clay with a 10 to -9 cm./sec permeability.

9. For the routine storage of biosolids, provide evidence of certification by the local government of the locality in which the biosolids are to be stored that the storage site is consistent with all applicable ordinances. Evidence of certification shall consist of the following:

In letters dated April 19, 2007 and June 14th, 2007 (Appendix E of the original application) the Cumberland County Planning and Zoning Administrator confirmed the Nutri-Blend's Biosolids Storage and Treatment Facility site does comply with Cumberland County zoning laws. Additionally, an Occupancy Permit was issued to the facility on Jan 31, 2008 (Appendix E of the original application).

a. A copy of the certification from the local government confirming that the storage site is consistent with all applicable ordinances, or where the local government fails to respond within 30 days of receiving the request for certification, a copy of the letter from the applicant to the local government requesting certification of the storage facility; **or**

N/A

b. A copy of the special exception or special use permit from the local government that has adopted an ordinance in accordance with § 62.1-44.19:3.R of the Code of Virginia.

N/A

Biosolids Transport

10. Provide a detailed description for each of the following:

a. Vehicles that will be used to transport biosolids from generators or storage to land application sites;

This is information located in each of the 20+ county permits.

b. Routes to be used to transport biosolids from the generator(s) to storage unit(s);

Appendix I contains the routes from 49 potential sources of biosolids or sludge that might utilize Nutri-Blend's Cumberland County facility. All routes were generated by MapQuest.

c. Procedures for biosolids off-loading at the biosolids facilities and the land application site together with spill prevention, cleanup (including vehicle cleaning) and emergency spill notification and cleanup measures; and

All trucks will be dumped inside the facility buildings(s). Trucks will exit the building(s) through a wheel wash station to remove sludge or biosolids adhering to the truck exterior. The Spill Control Plan is in the current O&M manual.

d. Voucher system to be used to document transport and delivery of biosolids from their source to the land application site or a facility to further process the biosolids for marketing. Also describe record retention for vouchers.

Every load of sludge or biosolids received by the facility is accompanied by a weight scale ticket showing the net weight of the load and the source. The tickets are forwarded to Nutri-Blend's Richmond, Virginia office and kept on file.

Field Operations

11. For field operations involving storage, provide a detailed description for each of the following:

Not applicable. All operations will take place inside the buildings.

a. Routine storage—procedures for biosolids loading of transport vehicles, equipment cleaning, freeboard maintenance for storage of liquid biosolids, and inspections for structural integrity of the storage unit;

b. On-site storage—procedures for DEQ approval and implementation; designated site locations if provided in the "Design Information"; the specific site criteria including the best management practices that will be utilized to prevent contact with storm water run on or runoff and the procedures to be followed to ensure the 45 day time limit will be met;

c. Staging - procedures for DEQ notification; procedures to be followed including either designated site locations provided in the "Design Information" or the specific site criteria for such locations including the liner or cover requirements and the time limit assigned for such use;

d. Procedures for reestablishment of off-loading and staging areas.

12. Provide a detailed description for each of the following: ***N/A***

a. The biosolids spreader vehicles and the specifications of each vehicle.
b. Procedures for calibrating each spreader based on the solids content of various biosolids to ensure uniform distribution and appropriate loading rates on a day-to-day basis.
c. Procedures used to ensure that operations address the following constraints:
   (1) Application of biosolids to frozen ground, pasture or hay fields, crops for direct human consumption and saturated or ice/snow covered ground; and
   (2) Establishment of setback distances, slopes, prohibited access for beef and dairy animals, soil pH requirements, and proper site specific biosolids loading rates on a field-by-field basis.

13. Provide a Land Applier Odor Control Plan that includes at a minimum: ***N/A***

a. Methods used to identify and abate malodorous biosolids in the field prior to land application, and
b. Methods used to abate malodorous biosolids if land applied.

Land Application Sites N*/A 14 - 24*

14. Provide a comprehensive list that includes each field proposed for inclusion in the permit. For each field include the following information using Form D VPA Permit Application Workbook Tab **D II.14.a Permitted Fields** or Tab **D II.14.b New Fields**: *DEQ Control Number; Site Book Name; Field ID in the format as it will be used in monthly reports; gross acres of the field; landowner names, date on landowner agreement(s); Tax parcel ID;* latitude and longitude of each land application site in decimal degrees to three decimal places and the method of determination; the type of site and crops to be grown. For modifications to existing fields, include the change

in acreage and a description of the modification to the field.

Submission of a completed Fields tab in the Form D VPA Permit Application Workbook supersedes the need to complete the Landowner Coordination Form in the Landowner Agreement, VPA Permit Application Form D-VI.

Site Type includes agricultural land, forest, a public contact site, or a reclamation site, as defined in 9VAC25-32-10.

Use the **Permitted Fields** tab for reissuance and modifications to existing fields. Use the **New Fields** tab for issuance of new permits and addition of new fields during reissuance and modifications.

When submitting a permit application for a permit modification, do not include existing permitted fields that are not being modified or removed.

16. Provide a properly completed Land Application Agreement form for each landowner, Part D-VI.
    - *Each landowner must sign his or her own landowner agreement form.*
    - *Provide the name, mailing address, and telephone number of the site owner identified on that form.*
    - *See Part D-VI: Land Application Agreement – Biosolids and Industrial Residuals – Instructions for specific details on completing the form.*

17. Provide a legible topographic map and aerial photograph, including legend, of proposed application areas to scale as needed to depict the following features:

    a. Property boundaries;
    b. Surface watercourses, including drainage ways;
    c. Water supply wells and springs;
    d. Roadways;
    e. Rock outcrops;
    f. Slopes;
    g. Sinkholes
    h. Frequently flooded areas (National Resources Conservation Service (NRCS) designation);
    i. Occupied dwellings within 400 feet of the property boundaries and all existing dwelling and property line setback distances;
    j. Publicly accessible properties and occupied buildings within 400 feet of the property boundaries and the associated extended setback distances; and
    k. The gross acreage of the fields where biosolids will be applied;

18. Provide a county map or other map of sufficient detail to show general location of the site and proposed transport vehicle haul routes to be utilized from the treatment plant or storage facility.

19. Provide county tax maps labeled with Tax Parcel ID(s)] for each farm to be included in the permit, which may include multiple fields to depict properties within 400 feet of the field boundaries.

20. Provide a USDA soil survey map, if available, of proposed sites for land application of biosolids.

21. Provide the name, mailing address, and telephone number of the person who applies biosolids to the site, if different from the applicant.

22. Provide the following information for each land application site that has been identified at the time of permit application, if the applicant intends to apply bulk biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site:

    a. Whether the applicant has contacted VA DEQ to ascertain whether bulk biosolids subject to 9VAC25-32-356 Table 3 has been applied to the site on or since July 20, 1993, and if so, the name of person contacted; and
    b. Identification of facilities other than the applicant's facility that have sent, or are sending, biosolids subject to the cumulative pollutant loading rates in 9VAC25-32-356 Table 3 to the site since July 20, 1993, if, based on the inquiry in item (a) above, bulk biosolids subject to cumulative pollutant loading rates in 9VAC25-32-356 Table 3 has been applied to the site since July 20, 1993.

23. Provide a nutrient management plan approved by the Department of Conservation and Recreation and a copy of the DCR approval letter for application sites meeting the following conditions:

    a. Sites operated by an owner or lessee of a confined animal feeding operation, as defined in subsection A of § 62.1-44.17:1 of the Code of Virginia, or confined poultry feeding operation, as defined in subsection A of § 62.1-44.17:1.1 of the Code of Virginia;
    b. Sites where land application more frequently than once every three years at greater than 50% of the annual agronomic rate is proposed;
    c. Mined or disturbed land sites where land application is proposed at greater than agronomic rates; or
    d. Other sites based on site-specific conditions that increase the risk that land application may adversely impact state waters.

24. For mined or disturbed sites where land application is proposed at greater than agronomic rates, provide a reclamation plan that establishes the biosolids application rates and other site-specific management practices.

Appendix A

Nutri-Blend Inc. Source List

Wastewater Treatment Works	Location	Treatment Process	Annual Production
County of Henrico	Henrico Co., VA	Anaerobic Digestion	29000 tons
Powhatan Dept of Corrections/ESV	Powhatan Co., VA	Aerobic Digestion	1200 tons
WASA - Blue Plains	Washington, D.C.	Anaerobic Digestion	85000 tons
Farmville	Farmville, VA	Aerobic Digestion	2000 tons
Piscataway	Accokeek, MD	Lime Stabilized	30000 tons
Richmond	Richmond, VA	Anaerobic Digestion	25000 tons
DOC - Buckingham Correctional Center	Buckingham, VA	Lime Stabilized	1500 tons
Petersburg	Petersburg, VA	Lime Stabilized	13000 tons

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-V NON-HAZARDOUS WASTE DECLARATION

For waste to be land applied, the owner of the treatment works, as defined by 9 VAC 25-32-10, must sign the following statement:

I certify that the waste from the facility identified below and described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act or the Virginia Hazardous Waste Management Regulation (9 VAC 20-60).

Facility Name: Farmville WWTP

VPDES, NPDES or State Permit Number: VA0083135

(Signature of Owner) 3/25/19 (Date)

Gerald J. Spates
(Printed Name of Owner)

Town Mgr.
(Title)

Generator Contact Information

Bennett Meador, Supt. WWTP
(Name and Title)

PO Drawer 368
(Address)

434. 392. 1803
(Phone Number)

Farmvillewwtp@embarqmail.com
(Email Address)

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-V NON-HAZARDOUS WASTE DECLARATION

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Facility Name: DC Wastewater Treatment Facility at Blue Plains

VPDES, NPDES or State Permit Number: DC0021199

(Signature of Owner)

March 26, 2019
(Date)

Aklile Tesfaye
(Printed Name of Owner)

Vice President, Wastewater Operations
(Title)

Generator Contact Information

Chris Peot
(Name and Title)

Director, Resource Recovery
(Address)

50000 Overlook Ave. SW Washington, DC 20032
(Phone Number)

202-787-4329
(Email Address)

cpeot@dcwater.com

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-V NON-HAZARDOUS WASTE DECLARATION

For waste to be land applied, the owner of the treatment works, as defined by 9 VAC 25-32-10, must sign the following statement:

I certify that the waste from the facility identified below and described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act or the Virginia Hazardous Waste Management Regulation (9 VAC 20-60).

Facility Name: South Central Wastewater Authority

VPDES, NPDES or State Permit Number: 0025437

(Signature of Owner) 3/22/2019 (Date)

James Gordon
(Printed Name of Owner)

Assistant Executive Director
(Title)

Generator Contact Information

Raymond J. Burpoe
(Name and Title)

900 Magazine Rd. Petersburg Va, 23803
(Address)

804 861-0111
(Phone Number)

Rburpoe@Scwwa.org
(Email Address)

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-V NON-HAZARDOUS WASTE DECLARATION

For waste to be land applied, the owner of the treatment works, as defined by 9 VAC 25-32-10, must sign the following statement:

I certify that the waste from the facility identified below and described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act or the Virginia Hazardous Waste Management Regulation (9 VAC 20-60).

Facility Name: RICHMOND WASTEWATER TREATMENT PLANT

VPDES, NPDES or State Permit Number: VA0063177

(Signature of Owner) 3-22-2019 (Date)

EDWIN EDMONDSON
(Printed Name of Owner)

PLANT OPERATIONS SUPERINDENTENT
(Title)

Generator Contact Information

EDWIN EDMONDSON, PLANT OPERATIONS SUPERINTENDENT
(Name and Title)

RICHMOND WASTEWATER TREATMENT PLANT, 1400 BRANDER ST, RICHMOND, VA 23224
(Address)

804-646-7808
(Phone Number)

EDWIN.EDMONDSON@RICHMONDGOV.COM
(Email Address)

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-V NON-HAZARDOUS WASTE DECLARATION

For waste to be land applied, the owner of the treatment works, as defined by 9 VAC 25-32-10, must sign the following statement:

I certify that the waste from the facility identified below and described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act or the Virginia Hazardous Waste Management Regulation (9 VAC 20-60).

Facility Name: Buckingham Correctional Center WWTP

VPDES, NPDES or State Permit Number: VA0066460

Robt L. Tolbert — 3-28-19
(Signature of Owner) (Date)

Robert L. Tolbert
(Printed Name of Owner)

Manager - North Western Service Area
(Title)

Generator Contact Information

Donna Lawson - Treatment Plant Supervisor
(Name and Title)

1349 Correctional Center Road, Dillwyn VA 23936
(Address)

434-983-4460
(Phone Number)

donna.lawson@vadoc.virginia.gov
(Email Address)

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-V NON-HAZARDOUS WASTE DECLARATION

For waste to be land applied, the owner of the treatment works, as defined by 9 VAC 25-32-10, must sign the following statement:

I certify that the waste from the facility identified below and described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act or the Virginia Hazardous Waste Management Regulation (9 VAC 20-60).

Facility Name: Powhatan Correctional Center

VPDES, NPDES or State Permit Number: VA 0020699

(Signature of Owner) 3/27/19 (Date)

Tim G. Newton
(Printed Name of Owner)

Director
(Title)

Generator Contact Information

Steve Spence Environmental Manager
(Name and Title)

(Address)

434-676-1298
(Phone Number)

Steve.spence@vadoc.virginia.gov
(Email Address)

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-V NON-HAZARDOUS WASTE DECLARATION

For waste to be land applied, the owner of the treatment works, as defined by 9 VAC 25-32-10, must sign the following statement:

I certify that the waste from the facility identified below and described in this application is non-hazardous and not regulated under the Resource Conservation and Recovery Act or the Virginia Hazardous Waste Management Regulation (9 VAC 20-60).

Facility Name: Henrico County Water Reclamation Facility

VPDES, NPDES or State Permit Number: VA0063690

(Signature of Owner) March 29, 2019 (Date)

James C. M. Grandstaff
(Printed Name of Owner)

Division Director, WRF
(Title)

Generator Contact Information

James Grandstaff
(Name and Title)

9101 WRVA Rd, Henrico VA 23231
(Address)

804-501-7689
(Phone Number)

gra@henrico.us
(Email Address)

NUTRI-BLEND

STORAGE BUILDING

VIRGINIA POLLUTION ABATEMENT APPLICATION

FORM D

MUNICIPAL EFFLUENT AND BIOSOLIDS

PART D-VI BIOSOLIDS APPLICATION AGREEMENT

This biosolids application agreement is made on 2-17-09 between John Simons referred to here as "landowner", and Nutri-Blend, Inc, referred to here as the "Permittee".

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as Storage Facility ("landowner's land"). Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of biosolids on landowner's land in amounts and in a manner authorized by (VPA) (VPDES) permit number _____ which is held by the Permittee.

Landowner acknowledges that the appropriate application of biosolids will be beneficial in providing fertilizer and soil conditioning to the property and consents to the application of biosolids on his property. Moreover, landowner acknowledges having been expressly advised that, in order to protect public health:

1. Public access to landowner's land upon which biosolids have been applied should be controlled for at least 30 days following any application of biosolids and no biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols;

2. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil, or 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation. Other food crops, feed crops and fiber crops shall not be harvested for 30 days after the application of biosolids;

3. Following biosolids application to pasture or hayland sites, meat producing livestock should not be grazed or fed chopped foliage for 30 days and lactating dairy animals should be similarly restricted for a minimum of 60 days. Other animals should be restricted from grazing for 30 days;

4. Supplemental commercial fertilizer or manure applications should be coordinated with the biosolids applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10.1-104.2 of the Code of Virginia to be supplied to the landowner by the permittee at the time of application of biosolids to a specific permitted site;

5. Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare).

6. Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

Permittee agrees to notify landowner or landowner designee of the proposed schedule for biosolids application and specifically prior to any particular application to landowner's land. This agreement may be terminated by either party upon written notice to the address specified below.

Landowner:

John J Simons

Nutri-Blend

Mailing Address:

P.O. Box 38060

Richmond, VA 23231

Permittee:

Nutri-Blend, Inc.

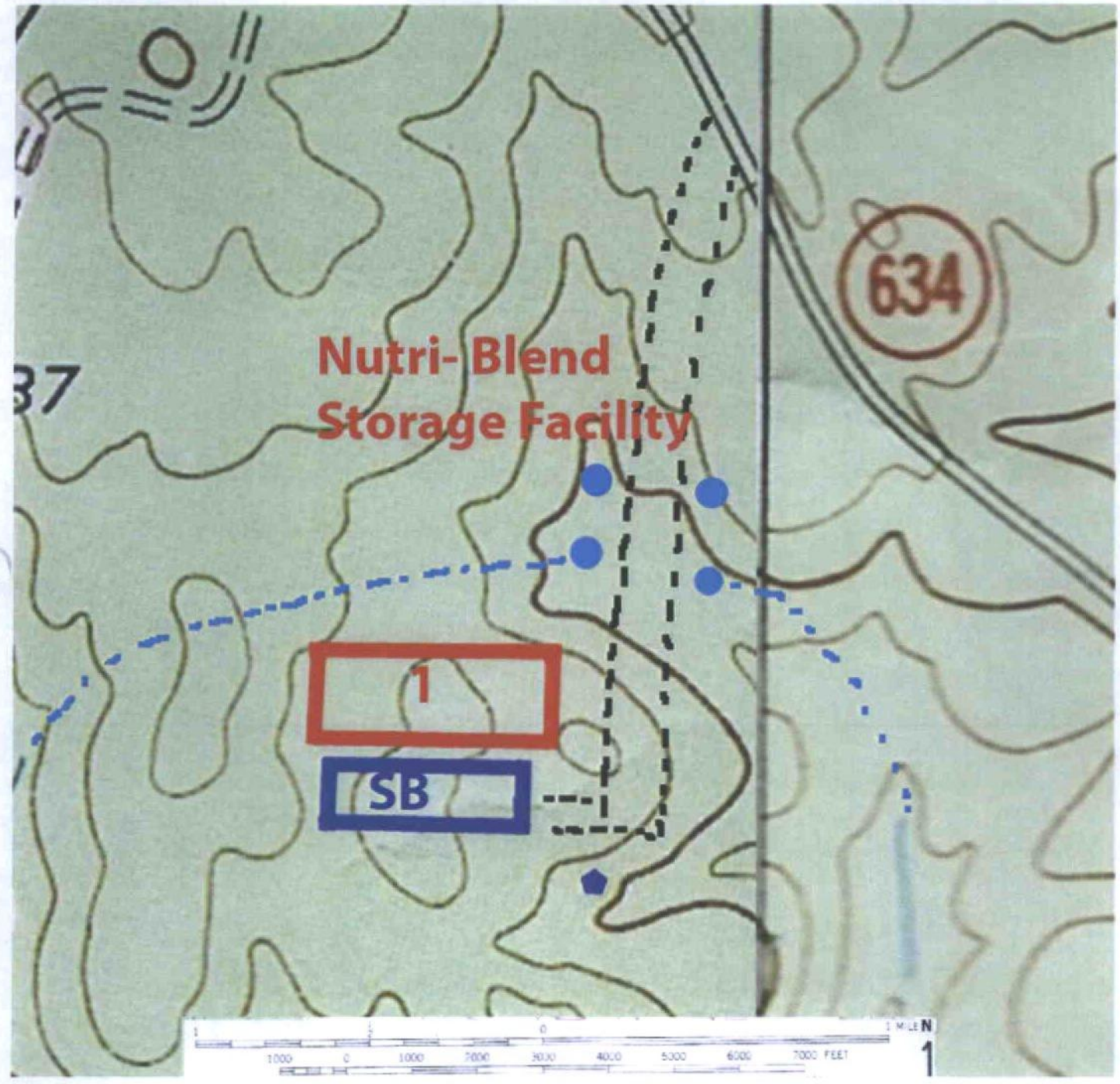
Mailing Address:

P.O. Box 38060

Richmond, VA 23231

Nutri Blend

BIOSOLIDS LAND APPLICATION



Map not to scale

Buffer Area	Road	Property Line
or Dwelling/Structure	Intermittent stream	Water
X Field Coordinate Location	Undeveloped Road	Wooded Area
	Fence	rck Rock Outcrop


78° 22' 52"
78° 22' 18"
37° 27' 24"
37° 27' 23"
731700
731800
731900
732000
732100
732200
732300
732400
4148700
4148600
4148500
4148400
4148300
4148200
4148100
4148000
4147900
4147800
4147700
Sharon Church Rd
5B
45B
6B
31B
24C
43A
24B
31C
37° 26' 48"
37° 26' 47"
78° 22' 54"
78° 22' 20"
Map Scale: 1:5,400 if printed on A size (8.5" x 11") sheet.
N
Meters
0 50 100 200 300
Feet
0 200 400 800 1,200

NUTRI-BLEND
STORAGE BUILDING
FIELD DATA SHEET

Field No.	Gross Ac.	Net Ac.
1	5.2	5.2
Totals	**5.2**	**5.2**

Report Number:
R09035-0072

Account Number:
73874

A&L Eastern Laboratories, Inc.

7621 Whitepine Road Richmond, Virginia 23237 (804) 743-9401
Fax No. (804) 271-6446 Email: office@al-labs-eastern.com

Send To: NUTRI-BLEND INC
POB 38060
RICHMOND, VA 23231

Grower: STORAGE BUILDING

Submitted By: NUTRI-BLEND INC

Farm I D: **Field I D:**

SOIL ANALYSIS REPORT

Page: 1 **Date Received:** 2/4/2009 **Date of Analysis:** 2/5/2009 **Date of Report:** 2/6/2009

Analytical Method(s):
Mehlich III

Sample Number	Lab Number	Organic Matter			Phosphorus		Potassium	Magnesium	Calcium	Sodium	pH		Acidity	C.E.C.
		%	ENR lbs/A	Rate	Available ppm	Rate	Reserve ppm	Rate	K ppm	Rate	MG ppm	Rate	CA ppm	Rate	NA ppm	Rate	Soil pH	Buffer Index	H meq/100g	meq/100g
SB	8751	1.9	79	L	23	L			94	M	185	H	420	L			5.0	6.7	2.7	6.6

Sample Number	Percent Base Saturation					Nitrate		Sulfur		Zinc		Manganese		Iron		Copper		Boron		Soluble Salts		Chloride		Aluminum	
	K %	Mg %	Ca %	Na %	H %	NO3-N ppm	Rate	SO4-S ppm	Rate	ZN ppm	Rate	MN ppm	Rate	FE ppm	Rate	CU ppm	Rate	B ppm	Rate	ms/cm	Rate	CL ppm	Rate	AL ppm	Rate
SB	3.7	23.5	32.0		40.9																				

ALE-Soil

Values on this report represent the plant available nutrients in the soil.
Rating after each value: VL (Very Low), L (Low), M (Medium), H (High), VH (Very High).
ENR - Estimated Nitrogen Release. C.E.C. - Cation Exchange Capacity.

Explanation of symbols: % (percent), ppm (parts per million), lbs/A (pounds per acre), ms/cm (milli-mhos per centimeter), meq/100g (milli-equivalent per 100 grams).
Conversions: ppm x 2 = lbs/A, Soluble Salts ms/cm x 640 = ppm.

This report applies to the sample(s) tested. Samples are retained a maximum of thirty days after testing. Soil Analysis prepared by:
A & L EASTERN LABORATORIES, INC.

by: Paul Chu, Ph.D.

Report Number:
R09035-0072
Account Number:
73874

A&L Eastern Laboratories, Inc.

7621 Whitepine Road Richmond, Virginia (804) 743-9401
Fax No. (804) 271-6446 Email: office@al-labs-eastern.com

To: NUTRI-BLEND INC
POB 38060
RICHMOND, VA 23231

For: STORAGE BUILDING

Copy To: NUTRI-BLEND INC

Date Received: 02/04/2009
Date Reported: 02/06/2009

SOIL FERTILITY RECOMMENDATIONS

Sample ID	Intended Crop	Yield Goal	Lime Tons/A	Nitrogen N lb/A	Phosphate P2O5 lb/A	Potash K2O lb/A	Magnesium Mg lb/A	Sulfur S lb/A	Zinc Zn lb/A	Manganese Mn lb/A	Iron Fe lb/A	Copper Cu lb/A	Boron B lb/A
SB	Adj pH To 6.8		2.5	0	0	0	0						

ALE-Rec

Paul Chu, Ph.D.